

Horticulture Northwest

Journal of the Northwest Ornamental Horticultural Society



Quercus garryana

Horticulture Northwest

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Mareen S. Kruckeberg



SOME COLLECTOR'S NOTES ON THE ENDEMICS IN THE
QUEEN CHARLOTTE ISLANDS IN BRITISH COLUMBIA

Dr. Roy L. Taylor, Director, University of British Columbia
Botanical Garden, Vancouver, British Columbia

I first went to one of the remotest areas of Canada, namely the Queen Charlotte Islands, at the time I was a student at McGill University and was employed during the summertime as a field assistant for a botanical survey initiated by the Federal Department of Agriculture in Ottawa. It was a unique opportunity for a student in botany to be able to participate in such an extensive field program. I left Ottawa in May with three other members of the party, namely Mr. James A. Calder, Dr. D.B.O. Savile, and a student entomologist. We traveled west by the CPR passenger train called "The Canadian," which was one of the best ways to see the broad expanses of Canada. After traveling for three days and two nights, we arrived in Calgary and took the train down to Lethbridge where we picked up a federal department vehicle. We drove to Vancouver and went north on the Union Steamships Line's freighter to Masset on the north island or Graham Island in the Queen Charlotte Islands. For a novice botanical student this was an auspicious start to a very interesting summer.

We had originally gone to the Queen Charlotte Islands as part of an overall general survey of the Province of British Columbia which had been initiated by Jim Calder several years before. The emphasis for the summer of 1957 was to be entirely focused on the Queen Charlotte Islands. The basic reason for the interest in the Islands was that few plants from the Islands were known and no extensive survey had ever been conducted. Furthermore, there was at least one known endemic from the Islands, *Senecio newcombei*, named after Dr. C. F. Newcombe, an avid botanist and ethnologist, who traveled to the Queen Charlottes at the turn of the century. In addition, a small scrap of a specimen of the genus *Saxifraga*, collected in the Queen Charlotte Islands in the late 1800s and deposited in the Herbarium at the New York Botanical Garden, indicated an unusual species closely allied to *Saxifraga vespertina* found in the Columbia Gorge. It was on the basis of not only interest in a remote area of Canada but the fact that there might be other endemics in an otherwise endemic-poor flora that we went with great expectations to the Charlottes that summer. We spent nearly three months on the Islands traveling by boat, plane, foot, and by truck to as many available areas as we could, and during the course of this exploration we were to find our first new species to science.

It's hard to describe the feelings of elation that one has when one finds a new species. The first new species we encountered was *Isopyrum savilei*, a member of the family Ranunculaceae. It was related to a species found at the mouth of the Columbia Gorge and to the north, a species in Japan. It was a distinctive species growing in wet runnels in the montane region. We had a great time trying to puzzle out the identity of this species. We were not able to place this species into its proper classification until we returned to Ottawa where we worked on it in detail in the laboratory. The description of *Isopyrum savilei* was subsequently published in Madrono and was named in honour of Doug Savile, who accompanied us and participated in the original collection of the species. One of the great joys of collecting in the Charlottes was the finding of these unusual taxa, and I remember with certain pleasure the

large numbers of *Senecio newcombei* that we found as we moved into the mountain areas. For a species that was basically unknown to science, except for the original description by Dr. E. L. Greene of the University of California on collections made by Dr. C. F. Newcombe, the plant had not really been recollected or looked at since then. It is one of the most handsome *Senecios* in that it has glossy and robust leaves and a pure yellow flower. When one is wandering through the extensive rolling blanket bogs in the mountainous areas, the bright yellow flowers are always a welcome sign in what many people believe to be a rather dull and drab environment. The precise and unique beauty of this plant is offset by the often stunted and bonsai-type forest in which it grows, and for this reason I suppose it is a plant that most vividly reminds me of the unique plants of the Islands. *Senecio newcombei* has subsequently been found off the Queen Charlotte Islands, but we now have good biological evidence that it is, indeed, a relic species, which persisted through the last glaciation and is now fairly widespread on the Queen Charlotte Islands in the montane area.

The many plant collections made on the Queen Charlotte Islands were carefully documented and consisted of numerous sets of dried specimens as well as preserved cytological material in vials. These were all duly shipped back to Ottawa and the long process of evaluating the collections and determining what the flora did indeed consist of was undertaken.

I went on to complete my doctoral degree in Botany at the University of California working under the direction of Dr. Lincoln Constance, who did his thesis on *Eriophyllum lanatum*, a common plant of the Puget Sound area. While at Berkeley, I usually took part in afternoon teas in the herbarium, and I was most surprised one day to hear people saying that I had a plant named after me. Much to my surprise, the *Saxifraga*, which represented one of the endemic species on the Islands, and which was represented by this scrappy specimen at the New York Botanical Garden from an earlier collection, had been named *Saxifraga taylorii* by Calder and Savile after me for my contribution to the work on the flora of the Queen Charlotte Islands. Naturally, it was a very proud moment for me as a botany student, and I'm pleased to say that it was a handsome plant that does well in cultivation. *Saxifraga taylorii* is unusual in having both diploid and tetraploid chromosome complements, but morphologically these two ploidy levels are not distinguishable. It probably represents one of the good examples of an auto-tetraploid, which is not all that common in the plant world.

After completing my dissertation, I returned to Ottawa to work as a Research Scientist with the Canada Department of Agriculture in the Plant Research Institute. I was able to rejoin colleagues whom I had worked with on the Queen Charlotte Islands and we activated the program on the writing of the flora of the Queen Charlotte Islands. The program led to a further expedition in the summer of 1964 to the Queen Charlotte Islands where we completed the collection of information and material for study of the flora. It seems an endless task when one is faced with collecting the large numbers of material that are necessary for careful evaluation of the flora, but it is only in this way that a careful documented study can be completed. We were fortunate to be able to have the support of many friends and colleagues in the development of this program and during the 1964 survey, Mr. Larry C. Sherk, a horticulturist, joined us to collect material to take back to Ottawa to evaluate from a horticulture point of view. At least one of these new endemics was used for a mass

planting effect in the spring flower show in Ottawa. This was the tetraploid *Mimulus guttatus* ssp. *haidensis*, which is found in the montane area. It represents a more robust and longer lasting flowered form of our ordinary lowland monkey flower. Following the 1964 survey we were able to complete the flora and then publish in 1968 the two-volume work; the first volume concerned with the systematics of the vascular plants, and the second volume documenting the cytological aspects of the flora.

The Charlottes have always remained islands of great interest to me, and I regularly return to explore the Islands, usually with educational groups. This coming summer we are taking a group of approximately 30 people through a program offered by the Centre for Continuing Education at the University, and we will have ten days of looking at the flora, the marine biology, the birds, and the historic anthropological aspects of the Islands. They are indeed one of the great heritages along the Pacific Coast, and it's our hope that the flora and fauna will be preserved, for they form a precious part of our natural heritage.

Saxifraga taylori
Marion Platek



Figures 1-4. *Saxifraga taylori* Calder & Savile. 1. Habit 2. Mature capsule.
3. Mature seed. 4. Flower.

Reprinted by permission of author, from Flora of the Queen Charlotte Islands by James A. Calder and Roy L. Taylor, Part I, page 388.

BEAR-GRASS EXPERIENCES

Roy Davidson, Bellevue, Washington

Our western bear-grass, *Xerophyllum tenax*, is one of the traveler's favorite wild flowers to be photographed in Glacier Park and other vacation spots. One would think, because it is such a fanciful and popular flower it would be found in many gardens. I suppose a very great many persons have tried to grow it; some must have had some success, but there seem to be no real rules about succeeding with it, other than to be patient. I cannot give advice beyond that, and relating some few observations.

I first knew the plant in Idaho's mountains, and on one summer holiday I brought back a big plant of it that had fallen from a steep roadbank and would soon have dried out and died left as it was. Near the top of the tiny rock garden in eastern Washington it was positioned in a northwestern exposure, where unless the hose reached it, the drought of June, July and August would have done it in. I had a tuft of that fascinating foliage for many years and then one year it got too dry and was gone without ever having flowered.

Some years later a lily was dug from a bog near the seafront in Siskiyou country, and along with it came a small bear-grass. Both of them prospered for many seasons, both flowering, which was a surprise. I believe that this plant, acclimated down to near sea level there where the mountains are falling into the sea, was only too willing to settle down under garden conditions. The lily finally exhausted itself, or perhaps was eaten by subterranean bogies, but the bear-grass has held on. It no longer flowers, but the original crown is now three and they seem to be gathering strength to some year give a trio of plumes, here in the Puget Sound garden.

The finest stands of this strange liliaceous subject seem to be in very old burns. One year in the vast back country between Mt. Adams and Mt. St. Helens, now so totally devastated by the latter's eruptions, we drove by such a slope over which great multicrowned clumps gave plumes as high as my head, and later a tremendous quantity of seed. Perhaps a dozen small seedlings were set into the garden in a number of places where the grassy rosettes might look well; next spring a garden helper, thinking them to be irises, cut the foliage back. For many years these blunt bobbed leaves continued to slowly elongate and ten years later are now totally replaced by the succeeding leaves which were barely emerging at the time. This illustrates how very slowly this plant grows and too, it explains there is no substitute for patience.

The finest plants are found in a deep soil; and it may be on steep slopes or elsewhere, but there must be ample soil moisture down deep even though the upper levels may be parched and dusty in summer. The soil should be rich in humus apparently, and there must be a goodly portion of a full day's sunshine for best performance; at least it is possible to find huge colonies of mature plants unflowering in dense shade.

A second species, *Xerophyllum asphodeloides*, called Turkey-Beard, is found on the Atlantic seaboard and inland in wet sandy situations with a high water table, as in the pine barrens. It is similar in every way yet not so spectacular



Xerophyllum tenax
Baldassare Mineo

in blossom. My few plants have not as yet flowered, seeming as slow as the western counterpart, and plants now over ten years old appear only about half-grown. But despair not, for the foliage of both is far more valuable than the blossom and, of course, simply unbeatable "grass" texture even if they never bloom. The tips will burn if drought reaches them, so just to make sure they aren't going to show such damage weeks and months after the event, drip-water overnight once a month in summer. If happily situated, it is a plant of permanent value. It is entirely possible that plants from lower elevations will flower at an earlier age, at least the one from Curry County, Oregon, did so.

A young fellow asked a veteran gardener how she had grown such a very large plant of a given rhododendron; the reply was, "To begin with, you must have started a very long time ago." So it is, too, if you would have a great display of *Xerophyllum*.



CHOISYA ARIZONICA

Sally Walker, Tucson, Arizona

One of the most attractive shrubs of the mountains of the Southwest is *Choisya arizonica*. It is very local in distribution in the mountains of southeastern Arizona, from 3,000 to 6,000 feet, often on limestone. One place where it is easy to find, however, is in the Mule Mountains where it even grows wild in the middle of Bisbee. Here it is often unrecognized amidst foundations and ruined buildings. Growing as it does at these higher elevations, and having to endure freezing and snowy weather, it should prove hardy in temperate climates. The shrubs are two to six feet high and often form understory in the evergreen oak zone. The leaves are yellowish-green in spring, changing to dark green later in the year. They are opposite and bear three to seven digitate leaflets, the center one being two inches long and one tenth inch wide. The margins have small teeth and are revolute, making the leaflets appear even narrower. Both the stems and leaves are dotted with glands. From the leaf shape has arisen one of its common names, "star leaf."

In late April and May, *Choisya arizonica* flowers profusely and then sporadically until October. The flower heads are at the end of the branches and each contains several stems about one and one-half inches long which have a terminal flower and several other flower heads or pink buds along it. There are five pinkish-brown indented sepals and five white petals one-half inch long ending in a short claw. The stamens form a ring around the ovary. The ten white flattened filaments are united, the longer ones of three-tenths inch alternating with ones half their size. The flowers are sweet scented, but this can be overcome by the smell of the foliage which is characteristic of the rue family to which it belongs. However, I think it hardly deserves its Mexican name of "zorillo" which is the word for skunk.



Choisya arizonica
Mimi Anderson Kamp



Choisya turnata
Sally Walker

Arizona has one other species of *Choisya*, *C. mollis*, which is even more local in distribution. It is found in the mountains of Santa Cruz County. This species has leaflets which are slightly wider and less revolute; the glands are less prominent and the petiole is longer. Superficially, the two plants are very similar.

According to the R.H.S. Dictionary of Gardening, *Choisya ternata* is referred to as a genus of a single species of evergreen shrub. This is a native of Mexico found from San Luis Potosi, through the Valley of Mexico, south to Oaxaca. It has flowers similar to *Choisya arizonica*, but its leaves are vastly different, being much larger.

Obviously *Choisya arizonica* is another plant of the future in the realm of beautiful flowering shrubs of the southwest which are just now coming to light.



EASY-ACCESS GARDEN

Dennis Thompson with Dan Douglas and Sally Taylor

"Handicap gardens" is a very condescending and limiting name and we prefer to think of our garden on the deck of Meadowdale Hall, Edmonds Community College, as an easy-access garden, open to everyone. It is, in fact, being constructed on the concrete deck with special attention to planting so that the materials can be reached from a seated position or without extreme stooping or without stretching too high for toddlers from the day care center. The containers range from the common commercial tubs to the very inexpensive and even the salvaged (an abandoned bathtub is blossoming in its second life as a large alpine trough). It is not only a garden of plants, but also a garden of ideas.

The plant material is also not always typical of materials in so-called handicap gardens. One of our blind students once commented that his main problems with the gardens for the blind was, "people think everything has to be soft and smelly." His preference in plant materials were trees "because the bark feels so interesting" and rosebushes and other plants with similar thorns. So, although our garden incorporates some soft, fragrant plants, that is not the main thrust. We are attempting alpine and succulent troughs, miniature landscapes, peaty bog troughs, and vegetables with a special emphasis, in this first portion of construction, toward native plants.

We sometimes forget that the very young, the elderly, and the handicapped are also heirs to the Northwest's natural heritage even though they are unable to wander the woods with us or scale to the alpine zones of the Olympics and Cascades. Our garden attempts to bring a few of these plants within everyone's grasp. From our lower zones we have Douglas fir and aspen with *Tolmiea*, oxalis, goat's-beard, lady-fern and swordfern, ledum, miner's-lettuce, and evergreen and red huckleberry. From the higher elevations we have true fir, elmera, heucheras (*Heuchera micrantha*, *H. cylindrica*, *H. grossularoides*), petrophytum, saxifrages (*Saxifraga caespitosa*, *S. bronchialis*, *S. oppositifolia*), penstemons (*Penstemon fruticosus* forms, *P. davidsonii* forms, *P. rupicola*) and the Olympic Mountain form of the shrubby potentilla. From drier climates east and south of the Puget Sound area we have *Lupinus lepidus* (such a lovely name I have to use it), huckleberry oak, manzanita, lewisias (*Lewisia tweedy*, *L. cotyledon*, *L. columbiana*), Californicae iris hybrids, *Clematis hirsutissima*, and sagebrush. Other natives include vine maple, Douglas maple, sedums (*Sedum spathulifolium* forms, *S. divergens*, *S. oreganum*) and various other annuals and perennials.

The garden is just beginning, but we invite you to come browse and watch it grow. We would also like to invite anyone interested in horticultural therapy to our Saturday seminars - October 18, "Introduction to Horticultural Therapy;" November 15, "Horticultural Therapy Projects in the Puget Sound Area;" and December 6, "Special Tools, Equipment and Containers for Therapy Projects."



PLANT SALE 1980



Quercus reticulata
Mareen S. Kruckeberg



Quercus hypoleucoides
Mareen S. Kruckeberg

HOW TO LANDSCAPE UNDER NEW GROWTH PRESSURES--CITIZEN RESPONSIBILITY

J. A. Witt, Curator of Plant Collections
University of Washington Arboretum

Changing environmental and social conditions which may be forecast for the next two decades will place a series of constraints on the traditional gardening and landscape techniques now practiced. It behooves the citizen interested in improving the public and private plantscape to become aware of these constraints and to look at them as opportunities rather than as detriments.

The constraints seem obvious. There will be less cheap energy available. This means those horticultural activities that in the past have been energy consumptive must be either eliminated or greatly reduced. This includes excessive water consumption, high energy fertilizers and pesticides, and power tools such as mowers and edgers. Urban and some suburban gardens will be smaller because of higher land costs and restricted building spaces. There will be increased pollution, including air, water, and paving. Finally, it seems probable that funding for public landscaping maintenance will be reduced because of general reductions in public monies available.

If we face these constraints, recognize that they are indeed facts of life, then we should be able to make them opportunities. It will require, however, moderate changes in our landscaping and gardening techniques. Look at the constraints listed above and it becomes obvious that none are really that severe if we are willing to adapt our thinking to change.

For instance, we should plan to use plant species which have low water requirements and are adapted to survival in this area of summer drought. If lawns are required, perhaps they don't have to be heavily fertilized, irrigated, and kept green all summer. After all, brown turf is the normal condition in the Pacific Northwest. Another alternative in certain locations might be to allow large grass areas to become meadows, mowed only once or twice a year as opposed to weekly mowings.

It is well known that too much fertilizer is applied to gardens now. In most instances the amounts used could be reduced substantially and in some instances eliminated completely. Where possible, waste organic materials--sludge, garbage and other organic debris--could be turned into compost and used instead.

We should reconsider our pest control programs--there would be considerable savings in energy if the dependence on high-energy chemicals was reduced and biological or natural controls allowed to develop. Granted this might mean notched leaves, aphid-sticky trees or other insect injuries. However, plants and their pests have co-existed for many eons and it is only recently that man insists on a "perfect" tree or shrub. I don't advocate letting valuable specimens perish from some pest. Indeed, pest control has its place in landscape maintenance, but I do feel we have a tendency to overreact.

Smaller landscape areas dictated by economic and population pressures may be blessings in disguise if there is size reduction in large energy consumptive, high maintenance, garden areas. High maintenance itself may lose its present bad name--we may see substituted labor intensive maintenance programs, particu-

N.O.H.S. NOTES

FALL 1980

Supplement to Horticulture Northwest

President's Letter

Dear Members and Friends:

As the fall season approaches, and with it the beauty of autumn color, we think of our gardens and fall planting. The Annual N.O.H.S. Fall Plant Sale will be Friday and Saturday, October 3 and 4, at the Museum of History and Industry. The Co-chairmen, Mary Fleming and Pat Venables, and their committees have been busy for months securing an excellent selection of plants.

Over the years, N.O.H.S. has built the reputation of having choice and hard-to-find plants available at their sales. The Fern Sale in June, chairmanned by Sue Olsen and eagerly awaited each year, again fulfilled the expectation of finding a wide variety of lovely ferns in top condition.

The Fall Garden Tour in the Highlands will be Monday, October 13, Columbus Day--a day when both husbands and wives may be able to visit these special gardens. One nationally recognized garden, a veritable treasure chest of rare and unusual plants, is spectacular in fall color. Another garden features interesting espalier (a signature of the landscape architect who built the house), a unique entry courtyard and an interior garden atrium which opens onto an expansive terrace and sweep of lawn surrounded by tall evergreens. A third garden of unusual charm has well-established plantings. The Florence Henry Memorial Chapel will be open.

The Garden Tour in June was most rewarding. We are grateful to the owners for sharing their gardens with us and to Nell Scott, Chairman, and her Committee for planning these tours.

Those of you who have attended one of the Workshops on Propagating at Marge Baird's home know that they are most informative, productive and fun. In June, slides of rhododendrons and azaleas from her garden were shown. After lunch, the group toured her garden. Cuttings were taken and identified.

At the N.O.H.S. Membership Meeting on August 27, it was voted to change the Annual Meeting date of the Northwest Ornamental Horticultural Society from November to April. Dr. Harold Tukey, Arboreta Director, spoke on the plans for Union Bay. Mr. Clarence Gerch of the Seattle Parks Department. spoke of the need for funding for the Arboretum. N.O.H.S. has sent a letter to each member on this subject.

Jo Hotson

COMING GARDEN EVENTS

- Oct. 3 & 4 NOHS Annual Plant Sale
Museum of History & Industry
2161 E. Hamlin
Oct. 3 10:00 a.m. - 6:00 p.m.
Oct. 4 10:00 a.m. - 3:00 p.m.
- Oct. 6 Seed Collecting in the Arboretum
Frances Roberson
Sponsored by the Arboretum Foundation
10:00 a.m. - Noon
- Oct. 7 Seed Planting Workshop
At the home of Marge Baird
8928 N.E. 33rd, Bellevue
Call Marge Baird, 454-3862 or Sylvia Duryee, 329-2062
10:00 a.m. - Nosebag lunch
- Oct. 13 Fall Color Garden Tour
The Highlands
Sponsored by NOHS
10:00 a.m., Washington Park Arboretum



Membership Application NORTHWEST ORNAMENTAL HORTICULTURAL SOCIETY

Policy:

To give financial support to the University of Washington Arboreta program and to other horticultural education endeavors.

Membership activities encompass:

Lecture Series, Study Groups, Annual Fern and Plant Sales, Tours of gardens of horticultural interest, Horticultural Journal.

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NORTHWEST ORNAMENTAL HORTICULTURE SOCIETY

Fall Color Garden Tour - The Highlands - October 13, 1980

- Price: \$20.00 includes bus, luncheon at The Seattle Golf Club and the tour of three outstanding gardens plus the Highlands Chapel. (\$10.00 donation to NOHS, tax deductible.)
- Meeting Place: 10:00 a.m. at the Washington Park Arboretum Office parking lot for bus pick-up OR 10:20 a.m. at St. Dunstan's Church, 750 N. 145th, Seattle. (Designate which pick-up you prefer.)
- Check to: Mrs. James R. Scott, NOHS Garden Tours
9103 Lake Washington Blvd. N.E.
Bellevue, WA 98004
(Reservations limited; no cancellation after October 1, 1980.)

Few gardens are designed to feature fall foliage color and fruit. Such gardens are transformed from their spring beauty to a dramatic palette of blazing color.

- 10:30
1. The Highlands Chapel: A most charming and picturesque church surrounded by beautiful gardens with many of the plants having been donated as memorials.
 2. A garden developed by Noble Hoggson, landscape architect, which is nestled among handsome specimens of our native conifers and madronas. The garden almost seems to absorb the home since both sides are blended together with a unique atrium serving as the thoroughfare. The house was designed to feature artistic use and treatment of espaliered vines and shrubs. It provides a wealth of ideas to be discovered such as the effectiveness of a 100-foot border of dwarf pines serving as an unclipped hedge.
 3. A traditional formal garden. Rarely does one see such a magnificently proportioned and impeccably groomed estate. The 150-year old vintage of evergreens are surrounded by expansive lawns with colorful borders. Delightful accents are found in the use of a wide range of smaller trees and shrubs in courts and arbors.
- 12:00 Luncheon at The Seattle Golf Clubhouse.
- 1:30
4. This garden features a landscape which is constantly changing from early spring on until it reaches an exuberance of fall color. Each season features different collections of the species which stagger their flowering show, whereas the fall display exists uniformly throughout the garden.

WELCOME NEW MEMBERS

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larly if energy costs rise above labor costs. After all, lawns can be mowed by hand-powered mowers and weeds can be pulled without benefit of weed killers.

Garden or landscape size has a strong effect on tree and shrub size; large estates call for massive plants, the new home or business landscaping will require smaller plants to stay in scale. Producing these will be the responsibility of plant breeders and selectors, either in the nursery industry or in schools of horticulture. We can no longer afford to plant forest giants under power-lines and expend the energy in keeping them pruned within bounds. These same selecting and breeding programs will also be concerned with developing resistance to diseases and insects and tolerance to environmental conditions that would be unsuitable for the majority of species we now use.

Given the constraints and the opportunities facing us in the future, what are our responsibilities? What actions must be taken to insure that while our energy supplies diminish and population pressures increase, our urban landscapes do not deteriorate?

The obvious answers are education and communication. We must educate the public to see the problems ahead, and to react to them in a positive way. It is the responsibility of those groups, be they garden clubs, horticultural societies, horticulturally related industry or institutions of higher education, to communicate their concerns about the potential deterioration of urban landscapes. They must also communicate with government to point out solutions to the problems facing us between now and the year 2000.

It is in this context that I see a key role for the University of Washington Urban Horticultural Center at Union Bay. When fully developed, the center should be the hub of an educational, research, and communications complex which will serve the entire Pacific Northwest.



Quercus vaccinifolia
Mareen S. Kruckeberg

SHEPHERDIA ARGENTEA - BUFFALO-BERRY

Brian Halliwell, Kew Gardens, London, England

There are three species in the genus *Shepherdia* which was named by Nuttall in 1818, although the plants had been discovered in the previous year by Rafinesque to which he had given the generic name of *Lepargyrea*, a name that is still sometimes used. *Shepherdia* commemorates John Shepherd, a curator of the Liverpool Botanic Gardens in England, who lived from 1764-1836, whilst the specific epithet of *argentea* is descriptive of the silvery appearance of leaves and young stems.

Shepherdia argentea is widespread in central North America from Manitoba and Saskatchewan to Kansas and Nevada, and whilst mostly east of the Rockies it extends into California; a plant suited to a continental climate of cold winters and hot dry summers, but which is less satisfactory in milder areas with cooler and moister summers. It is tolerant of extreme winter cold and summer drought and is recommended as a shrub for temperature zone II.

Although mostly a large shrub with light grey branches, it will, when conditions suit, make a small tree up to fifteen feet in height. Much branched, with most of the smaller side shoots ending in a sharp point, it has young stems which are white and hairy. Opposite oblong leaves are up to two inches in length and one-half inch in width and these are covered with silvery scales. Flowers are produced in early spring, in March or April, and whilst rather small do provide some spectacle on the mostly bare shoots. Male and female flowers are produced on different plants at leaf axils, those of the female being in pairs, the male in clusters. Following fertilization small egg-shaped, one-seeded, fleshy fruits develop which can be yellow, but are more usually orange or red. Though of an acid flavor, these are edible and used for making sauces, jellies or preserves.

In the garden this is a handsome foliage plant, being most effective when planted in front of a dark evergreen or conifer. The colour of its branches and stems against the dark background are almost as attractive in winter. Females are especially showy in the fall when the silvery leaves act as a contrast to the orange or red berries. To ensure that fruits are produced, select plants which have been sexed and plant in groups of one male to three or four females. Habit of growth with its spine-tipped side shoots make it well suited to boundary planting where, with one trimming a year in July, it will make an impenetrable hedge.

Propagation is most easy from seed when this is available and where considerable numbers of plants are required. Extract the seed from the fruit whether fresh or dried, wash and sow out-of-doors in the fall. Select a position where the soil, though well drained, is retentive of moisture and after sowing cover the seed with one fourth inch of soil; germination will take place in the spring as temperatures rise. Space out the seedlings when a year old and when planting a hedge, use plants no older than two years.

When fruiting subjects are required, vegetative propagation is necessary from known male and female plants. Take cuttings two to four inches long in late summer from new growth that is just beginning to mature of non-fruiting stems. Better success in rooting will be achieved if cuttings are taken from young stock plants. In preparing the cutting, remove only the basal pair of leaves, dip into a rooting compound and insert into a mixture of equal parts of sharp sand and peat to which a small quantity of soil has been added. Place the cutting containers in a frame or glasshouse out of direct sunlight and leave undisturbed, even though rooted, until the following spring when each should be potted separately just before new growth begins. Rooted suckers can be detached from the base of established shrubs in late March and potted separately until the new plants develop a good root system.



Lithocarpus densiflora echinoides
Mareen S. Kruckeberg

PLEASURES OF A CAT'S GARDEN

by Aggie and Help

Some human has observed that the common house cat (a chauvinist cliché of the worst sort; I have never met a cat I would slander as common or limit to any structure!) has little input about its family's garden. Considerations are given loathesome dogs who sprawl in any moist plants on warm days and unearth clumps of rare bulbs to hide a steak bone. Rewarding this uncouth nature, they are given entire yards as dog runs and are bribed away from azaleas and other exotics with their own boxwood plants for their disgusting territorial exhibitions which no cat would be so crude as to imitate! It is time we cats unite and demand equal rights in the garden!

No garden should be without its warm stones. One is not enough. There must be at least one large, exposed stone, toward the west side of the front of the property, to be heated by the warming rays of the sun from earliest morning to sunset. Preferably it will be surrounded by plant materials with interesting smells, but without hairy leaves that hold the miserable moisture which too often falls in this area. There should be similar stones in the rear garden. When enough stones are available, informal garden gatherings can be much more festive! Also, the variety prevents monotonous vistas.

There should be a few regal perches on the property. For cats restricted to humble abodes, this may be a simple overturned bucket or perhaps a concrete block. For those of us who are better situated, it can be a broad-croched tree or even a carpeted post. As a Siamese accustomed to elegance, I have my ten-foot tall dove grey post subtended by a lattice fence connected to an octagonal garden structure which is excellent for leisurely strolls.

But a garden, after all, is plants! It is unbelievable how gullible men are! For centuries they have been hoodwinked with a myth that we are mad for catnip (*Nepeta cataria*). *Nepeta* interests me not at all growing in the garden (and only mildly when dried). In chatting with other discerning felines, I find this apathy is commonplace. Even Tom from next door, hardly a connoisseur of anything, cannot be enticed to sniff my catnip. Other plants in the garden I do delight in and occasional friends and strangers drop by to share them also. Early in the Spring on warm days when the sun has opened them completely, I attend the croci (much nicer than crocuses, don't you think?). From a rather large selection, I show a distinct preference for forms of *Crocus biflorus*, although I also spend a fair amount of time with *Crocus fletcheri* which has its own warm rock.

In April I enjoy the flowers of most of the mustard family. I am rather partial to *Alyssum saxatile*, although it frequently makes me sneeze, as does one of my favorite foliages, *Pelargonium tomentosum*. During the summer I pay a good deal of attention to the thymes, especially when they drape artistically across a warm rock and provide a suitable background for my figure. This brings to mind the second main attraction; the bristly twigs are marvelous for rubbing and combing facial fur. Other nice "combing" foliages include *Lavendula*, *Rosmarinus*, *Yucca*, and occasional roses.



Aggie by Dennis Thompson

However, the best genus is *Teucrium*. Are there words to describe such bliss this side of heaven! *T. spinescens* is delightful. It may be either sniffed or chewed, and is an extraordinary face comber. Being armed has prolonged its life, but it has been so damaged by extensive use that I have had to demand another! The creme de la creme of plants is not *T. spinescens*, however, but *T. marum*. It brings back the kittenhood of warm summers and first mice. My first plant lingered in the garden less than one day, but I continued to roll on the spot of its memory for a month! (It's sad that displays of affection so frighten humans. Now all the newer propagations are shielded under hardware cloth, or upturned terrariums.....pity.) One widely published bigot, Reginald Farrer, related,

"As for pretty pink *T. marum*, gardeners will be well advised not to admit the Catnip, for the stomachic qualities of this are known to others than humans, and every cat in the county will come to parties on it every night, with such stimulating effect that not only does *T. marum* vanish beneath their attentions, but also every other plant in the place gets uprooted in the insensate gambollings produced by their intoxication, or else oppressed by the slumbers of the later stage, when the Bacchants usually choose *Eritrichium* or *Gentiana bavarica* for their beds."

Victorian prude!

Finally, catboxes ("inhouses," I call them) are passe. Nothing is so healthy as the fresh outdoors. Nature's call is best answered in the garden, even though rain and the cold of winter are distinct inconveniences. It is a fortunate cat indeed who can lure its family deeply enough into gardening to require a greenhouse. (Contrary to popular superstition, no greenhouse is catproof. What fools these mortals be!) A clean sandbox with bottom heat at 70° is very homey and dries out quickly. It also provides an excellent chaise with the cuttings arranged therein also serving as satisfactory face combers during inclement weather.

CATS UNITE!

DEMAND YOUR RIGHTS!

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(Note to novice garden cat providers: It is wise when placing *T. marum* in the garden to cover the plant with a cage of hardware cloth shaped like a strawberry basket and *firmly* pegged into the soil to protect the base of the plant. As Farrer suggests, it is probably wise to site it well away from delicate treasures. *Dennis Thompson*)



SEED EXCHANGE

Alfred Evans
Royal Botanic Garden, Edinburgh, Scotland

Thank you very much for arranging to have these seeds sent so speedily. Needless to say, they will not linger in the packets for long, but very soon they will be returned to their parent earth where, I trust, they will lie cozily and, eventually, germinate.

It is always a thrill to receive seeds which have been collected from a wild source. And it is particularly exciting when one has been to the land from whence they came. The *Campanula piperi*, the *Erythronium grandiflorum* and the *Anemone occidentalis* have an association for me that will be forever green. I can still see them in my mind's eye, braving the elements and putting on a display for us that took our breath away.

NOHS SEED EXCHANGE

Seed for Discriminating Gardeners

A seed exchange plays an important role in any organization's growth and development. It is an opportunity for members to share their treasured rare plants with others, as well as to obtain long desired plant material. The NOHS initiated such a seed distribution in January 1979 to broaden the scope of our activities and services to our members.

This is the third year for the NOHS seed exchange. We will need the cooperation of all members who grow unusual plants, and/or collect seed in the wild, in order to make it a success. We are looking for seed of trees, shrubs, herbaceous plants and spores of ferns which are: 1) little known and grown, rare and unusual, 2) predominantly, but not exclusively, Northwest American natives, or plants particularly appropriate to Northwest gardens; and which are not: 1) readily available in nurseries, 2) easily obtainable in other seed exchanges (American Rhododendron Society, American Rock Garden Society, etc.), or 3) hybrids.

The final date for seed donation will be January 15, 1981. A seed list will be published as soon thereafter as is possible, with an order form, and distributed to all members, air mail to overseas members. The orders of seed donors will be filled first. A small fee will be charged for each packet of seed to cover costs of packaging and mailing.

The following procedure should be closely observed in donating seed:

1. Seed should be fresh and apparently viable (collected recently).
2. Seed should be cleaned of excess dirt, debris, etc., wrapped in tissue or waxed paper (not plastic), clearly labeled as to genus, species, where collected, something about growing conditions if possible, and donor's name.
3. If seed cannot be sent in immediately, it should be stored in a refrigerator at approximately 40° F.
4. To mail, enclose all separately-wrapped and marked seed in appropriate size envelope, seal, mark with your name, return address, and the words, "Hand Cancel Only, Please" written in a conspicuous place on the front, and send to:

Mary Kenady, 18013 W. Snoqualmie Valley Road N.E., Duvall, WA 98019.

Tidbits

by Ladybug



Those wonderful oaks illustrated in this issue of Horticulture Northwest will be featured in the Trees and Shrubs department of the NOHS Fall Plant Sale. Careful selection of a planting site is necessary, with permanence a major consideration because once established they are difficult to move. Allow sufficient room for growth.



"By the time you receive this note I'll be on my way to the People's Republic of China for a three-month collecting trip in central China to the land where 'Chinese' Wilson collected and where the genus *Metasequoia* was 'discovered.' Yes, shortly after you left I was asked to participate in this expedition. Five botanists from the U.S. will be going. Should be very exciting....."

Jim Luteyn, New York Botanical Garden
Bronx, New York



Brian Halliwell writes, "*Choisya arizonica* is still only a few inches high and has grown very slowly during the two years we have had it, although it did survive last winter, which was very cold. I suspect that it is going to take a few years before it flowers."



SEED EXCHANGE - 1981

See Page 57, this issue.



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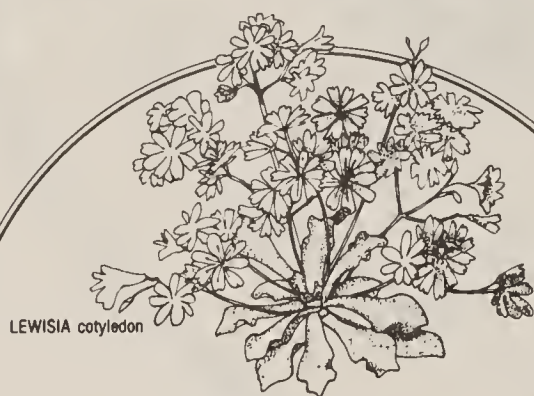
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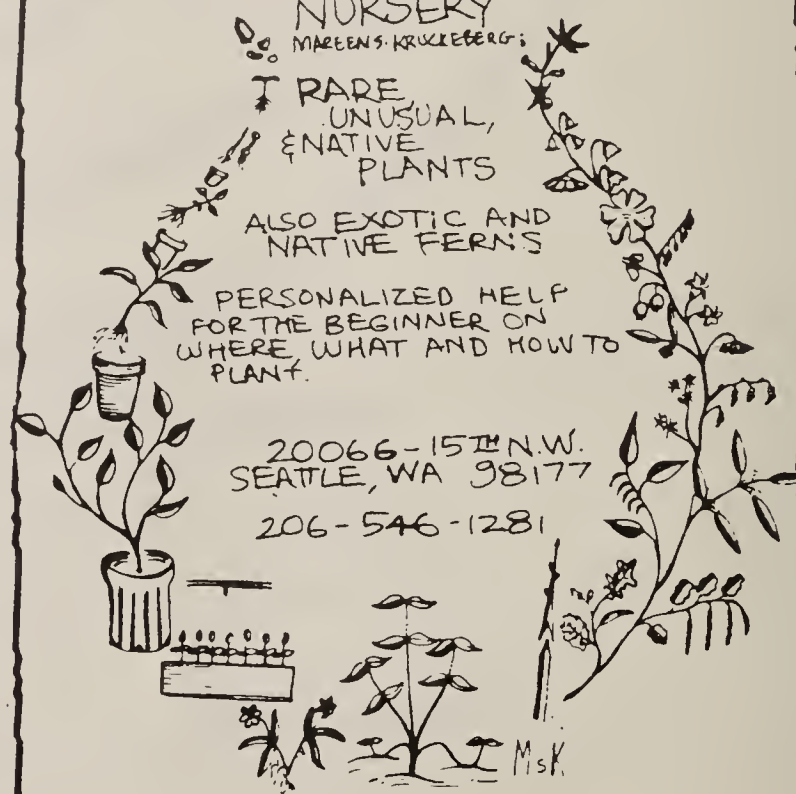
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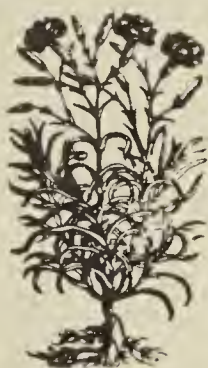
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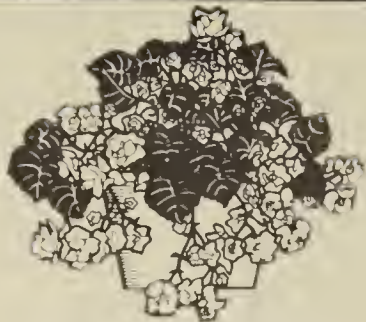
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